NOVEMBER/DECEMBER 2025

FIM52/CIM52 — DATABASE MANAGEMENT SYSTEM

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

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1. Define DBMS.
2. State any two purpose of a database.
3. Draw the symbol for a weak entity in an ER diagram.
4. What is a query?
5. List any two DDL commands in SQL.
6. What are the uses of COMMIT command?
7. Write the syntax for INNER JOIN.
8. Define Primary Key constraint.
9. What is trigger in PL/SQL?
10. What is an exception in PL/SQL?

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Analyze the components of a DBMS system with a neat diagram.

Or

(b) Explain mapping constraints in ER modeling with an example.

12. (a) Explain the structure of relational model.

Or

(b) Differentiate tuple relational calculus and domain relational calculus.

13. (a) Write SQL commands to create a table Employee with attributes (EmpID, Name, Salary). Add primary key constraint.

Or

(b) Write SQL queries for Insert and Update operations on a table.

14. (a) Categorize the different types of joins with suitable examples.

Or

(b) Write SQL examples for Union, Intersect, and Minus operators.

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15. (a) Identify and explain the structure of a PL/SQL block with an example.

Or

(b) Write a PL/SQL program to handle exceptions.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Discuss the overall DBMS system architecture with a neat diagram.

17. Explain the different operations in relational algebra with examples.

18. Create a table for Student details (ID, Name, Age, Dept). Write SQL queries to:

(a) Insert values,

(b) Update age,

(c) Delete a record,

(d) Display all records.

19. Explain all integrity constraints in SQL with example.

20. Write a PL/SQL procedure and function for calculating the total and average of 5 subjects for a student.

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